

## **DUAL PISTON ROTARY VALVE FLUID PROCESSING SYSTEM**

### **ABSTRACT OF THE DISCLOSURE**

Apparatus and methods are provided for manipulating fluids, for instance, to determine the presence or absence of an analyte in a sample. In one embodiment, a fluid control and processing system comprises a plurality of chambers; a body including a fluid sample processing region; and a plurality of valves. Each valve includes a valve body having a fluid displacement region which is depressurizable to draw fluid into the fluid displacement region and pressurizable to expel fluid from the fluid displacement region, the valve body including an external port. The fluid displacement region is fluidically coupled with the external port of the valve body. The valve body is adjustable with respect to the fluid sample processing region to place the external port selectively in fluidic communication with the fluid sample processing region. The valve body is adjustable with respect to the plurality of chambers to allow the external port to be placed selectively in fluidic communication with the plurality of chambers.

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